

0034



ANDALEX
RESOURCES, INC.
Tower Division

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RECEIVED

MAY 03 2002

DIVISION OF
OIL, GAS AND MINING

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FACSIMILE TRANSMITTAL SHEETDATE: May 3, 2002

PLEASE DELIVER THE FOLLOWING PAGES TO:

NAME:

Danika Cornburgh-Littig

COMPANY:

LIDOGM

FACSIMILE NUMBER:

(801) 359-3940

FROM:

Mike Glasen

TOTAL NUMBER OF PAGES (INCLUDING COVER SHEET):

16.

Pam - the originals which I will Fedex today are red-lined
Please see final page for letter requesting extension to complete the field work.

Thanks,
Mike

Incoming
C/007/04/
Copy Karl:
Bregg

OK

**WEST RIDGE** RESOURCES, INC.

P.O. BOX 902
PRICE, UTAH 84501
PHONE (435) 637-8385
FAX (435) 637-8860

May 2, 2002

Pamela Grubaugh-Littig
Permit Supervisor
Utah Division of Oil, Gas & Mining
P.O. Box 145801
Salt Lake City, Utah 84114-5801

Re: NOV Abatement N02-49-1-1
West Ridge Mine
C/007/041-AM02A
Carbon County, Utah

Dear Ms. Grubaugh-Littig,

Enclosed is the information requested in the T/A dated April 8, 2002. All revised pages should be inserted in Appendix 7-4. A C/C₂ Form is also enclosed.

This submittal is based on results of our meeting and subsequent conversation with Mr. Greg Galecki. The revisions address all concerns in the T/A, including the request to use the 10 year - 24 hour event for ditch design.

Please disregard the previous submittal of 04/30/02.

Sincerely,

Michael W. Glasson
Environmental Coordinator

Permit Change <input checked="" type="checkbox"/>	New Permit <input type="checkbox"/>	Renewal <input type="checkbox"/>	Transfer <input type="checkbox"/>	Exploration <input type="checkbox"/>	Bond Release <input type="checkbox"/>	Permit Number: C/007/041																																													
Title of Proposal: NOV Abatement						Mine: WEST RIDGE MINE																																													
						Permittee: WEST RIDGE RES.																																													
Description, include reason for application and timing required to implement:																																																			
<p>Instructions: If you answer yes to any of the first 8 questions (gray), submit the application to the Salt Lake Office. Otherwise, you may submit it to your reclamation</p>																																																			
<table border="1"> <tr> <td>X Yes</td> <td><input type="checkbox"/> No</td> <td>9. Is the application submitted as a result of a Violation? NOV # N-02-49-1-1</td> </tr> <tr> <td><input type="checkbox"/> Yes</td> <td>X No</td> <td>10. Is the application submitted as a result of other laws or regulations or policies? Explain: Request by Division.</td> </tr> <tr> <td><input type="checkbox"/> Yes</td> <td>X No</td> <td>11. Does the application affect the surface landowner or change the post mining land use?</td> </tr> <tr> <td><input type="checkbox"/> Yes</td> <td>X No</td> <td>12. Does the application require or include underground design or mine sequence and timing? (Modification of R2P27)</td> </tr> <tr> <td><input type="checkbox"/> Yes</td> <td>X No</td> <td>13. Does the application require or include collection and reporting of any baseline information?</td> </tr> <tr> <td><input type="checkbox"/> Yes</td> <td>X No</td> <td>14. Could the application have any effect on wildlife or vegetation outside the current disturbed area?</td> </tr> <tr> <td><input type="checkbox"/> Yes</td> <td>X No</td> <td>15. Does application require or include soil removal, storage or placement?</td> </tr> <tr> <td><input type="checkbox"/> Yes</td> <td>X No</td> <td>16. Does the application require or include vegetation monitoring, removal or revegetation activities?</td> </tr> <tr> <td><input type="checkbox"/> Yes</td> <td>X No</td> <td>17. Does the application require or include construction, modification, or removal of surface facilities?</td> </tr> <tr> <td>X Yes</td> <td><input type="checkbox"/> No</td> <td>18. Does the application require or include water monitoring, sediment or drainage control measures?</td> </tr> <tr> <td>X Yes</td> <td><input type="checkbox"/> No</td> <td>19. Does the application require or include certified designs, maps, or calculations?</td> </tr> <tr> <td><input type="checkbox"/> Yes</td> <td>X No</td> <td>20. Does the application require or include subsidence control or monitoring?</td> </tr> <tr> <td><input type="checkbox"/> Yes</td> <td>X No</td> <td>21. Have reclamation costs for bonding been provided for?</td> </tr> <tr> <td><input type="checkbox"/> Yes</td> <td>X No</td> <td>22. Does application involve a perennial stream, a stream buffer zone or discharges to a stream?</td> </tr> <tr> <td><input type="checkbox"/> Yes</td> <td>X No</td> <td>23. Does the application affect permits issued by other agencies or permits issued to other entities?</td> </tr> </table>							X Yes	<input type="checkbox"/> No	9. Is the application submitted as a result of a Violation? NOV # N-02-49-1-1	<input type="checkbox"/> Yes	X No	10. Is the application submitted as a result of other laws or regulations or policies? Explain: Request by Division.	<input type="checkbox"/> Yes	X No	11. Does the application affect the surface landowner or change the post mining land use?	<input type="checkbox"/> Yes	X No	12. Does the application require or include underground design or mine sequence and timing? (Modification of R2P27)	<input type="checkbox"/> Yes	X No	13. Does the application require or include collection and reporting of any baseline information?	<input type="checkbox"/> Yes	X No	14. Could the application have any effect on wildlife or vegetation outside the current disturbed area?	<input type="checkbox"/> Yes	X No	15. Does application require or include soil removal, storage or placement?	<input type="checkbox"/> Yes	X No	16. Does the application require or include vegetation monitoring, removal or revegetation activities?	<input type="checkbox"/> Yes	X No	17. Does the application require or include construction, modification, or removal of surface facilities?	X Yes	<input type="checkbox"/> No	18. Does the application require or include water monitoring, sediment or drainage control measures?	X Yes	<input type="checkbox"/> No	19. Does the application require or include certified designs, maps, or calculations?	<input type="checkbox"/> Yes	X No	20. Does the application require or include subsidence control or monitoring?	<input type="checkbox"/> Yes	X No	21. Have reclamation costs for bonding been provided for?	<input type="checkbox"/> Yes	X No	22. Does application involve a perennial stream, a stream buffer zone or discharges to a stream?	<input type="checkbox"/> Yes	X No	23. Does the application affect permits issued by other agencies or permits issued to other entities?
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<p>X Attach 3 complete copies of the application.</p>																																																			
<p>I hereby certify that I am a responsible official of the applicant and that the information contained in this application is true and correct to the best of my information and belief in all respects with the laws of Utah in reference to commitments, undertakings, and obligations herein.</p> <p><i>Wende L. Jacobson</i> <i>Env. Coord.</i> <i>05/02/02</i> Signed - Name - Position - Date</p> <p>Subscribed and sworn to before me this <u>2</u> day of <u>May</u>, <u>2002</u></p> <p><i>Wende L. Jacobson</i> My Commission Expires: <u>1-7-2006</u> Notary Public STATE OF UTAH COUNTY OF <u>UT</u> <i>Carbon</i></p>						<p>Received by <u>CL Des & Mining</u></p> <p>ASSIGNED TRACKING NUMBER</p>																																													

Application for Permit Processing Detailed Schedule of Changes to the MRP

Title of Application:

NOV Abstement

Permit Number: C/007/041

Mine: WEST RIDGE MINE

Permittee: WEST RIDGE RES.

Provide a detailed listing of all changes to the mining and reclamation plan which will be required as a result of this proposed permit application. Individually list all maps and drawings which are to be added, replaced, or removed from the plan. Include changes of the table of contents, section of the plan, pages, or other information as needed to specifically locate, identify and revise the existing mining and reclamation plan. Include page, section and drawing numbers as part of the description.

[illegible]

Any other specific or special instructions required for insertion of this proposal into the Mining and Reclamation Plan?

04/02

Design Parameters**2.1 Precipitation**

The precipitation-frequency values for the area were taken from "NOAA, Precipitation-Frequency Atlas of the Western U.S., Atlas 2, Volume VI.

<u>Frequency - Duration</u>	<u>Precipitation</u>
2 year - 6 hour	0.82"
10 year - 6 hour	1.30"
10 year - 24 hour	2.00"
25 year - 6 hour	1.60"
25 year - 24 hour	2.40
100 year - 6 hour	2.00"
50 year - 24 hour	2.60"

Disturbed ditch and culvert designs for runoff control are based on the 10 year - 24 hour event of 2.00" and the 25 year - 6 hour event of 1.60", where required.

Undisturbed culvert designs are based on the 10 year - 24 hour event of 2.00".

It should be noted that all hydrologic structures are constructed larger than the minimum design requirements, as an added safety measure. Maintenance requirements, however, are expected to be as required by regulation.

The sedimentation pond is designed to contain the runoff from a 10 year - 24 hour event of 2.00" as required by the Division. Reclamation designs are based on the 100 year - 6 hour event of 2.00", where applicable for permanent structures.

ASCA areas are sized to contain or treat runoff from a 10 year - 24 hour precipitation event.

04/02

2.3 Velocity

Flow velocities for each ditch structure were calculated using the Storm computer program with Manning's Formula:

$$V = \frac{1.49 R^{2/3} S^{1/2}}{n}$$

where: V = Velocity (fps)
 R = Hydraulic Radius (ft.)
 S = Slope (ft. per ft.)
 n = Manning's n; Table 3.1, p.159,

"Applied Hydrology and Sedimentology for Disturbed Areas", Barfield, Warner & Haan, 1983.

Note: The following Manning's n were used in the calculations:

<u>Structure</u>	<u>Manning's n</u>
Culverts (cmp)	0.020
Rip-rapped or Natural Drainage Channels	0.035
Unlined Disturbed Area Ditches	0.035
Concrete or Bedrock Channels	0.015

2.4 Drainage Areas

All drainage areas were planimeted directly from As-Constructed Maps 7-1 (Drainage Area Map) and 7-2 (Minesite Drainage Plan).

2.5 Slopes, Lengths

All slopes and hydraulic lengths were measured directly from the topography on Maps 7-1 and 7-2.

04/02

All disturbed area culverts are temporary, and will be removed upon final reclamation.

2.10 Ditches

Ditches are shown on the Minesite Drainage Plan, Map 7-2, and are designated with a DD-number (i.e., DD-1) for Disturbed Area Ditches or a UD-Letter (i.e., UD-X) for Undisturbed Area Ditches.

Disturbed drainage areas, along with some undisturbed drainage areas, report to disturbed drainage area ditches with the corresponding subscript number; for example, disturbed drainage area DA-3 (along with undisturbed drainage area UA-3) reports to disturbed drainage area ditch DD-3.

All ditches are designed to carry the expected runoff from a 10 year - 24 hour event with a minimum freeboard of 0.5' (See Figures 3 and 4). The 0.5' freeboard represents a minimum of 20% of the flow depth in all disturbed area ditches.

Ditches which exhibit expected flow velocities of 6 fps or greater based on the 10 year - 24 hour runoff, will be lined with rip-rap or concrete or constructed on bedrock. Typical cross-sections, flow depths and areas for all lined and unlined ditches are shown on Figures 3 and 4 of this report.

The 6 fps limiting velocity for unlined ditches was selected from Table 3.2, Limiting Velocities and Tractive Forces for Open Channels, "Applied Hydrology and Sedimentology for Disturbed Areas", Barfield, Warner & Haan, 1983. The material selected for limiting velocity was Shales and Hardpans and Coarse Gravel Noncollodial, which is typical of the materials in the West Ridge Mine area.

It should be noted that ditch DD-1 has a calculated flow velocity of 6.02 fps. Based on consultation with the Division, this ditch will not be lined unless it exhibits erosion in the future. Three additional ditches have calculated flows in excess of 6 fps. These are ditches DD-4, D-6 and DD-8A. DD-6 is constructed on bedrock, has been in place for 3 years, and shows no sign of eroding into the bedrock. Although the bedrock is in the ditch bottom, there are no plans to further line the ditch since erosion is not occurring. DD-8A has been rip-rapped in accordance with the plan. DD-4 will also be lined according to the plan.

Ditch slopes have been determined from Map 7-2.

All ditches will be inspected regularly, and maintained to the minimum dimensions for the required 10 year - 24 hour runoff to provide adequate capacity for the design flow. All ditches are temporary and will be removed as described under the reclamation hydrology section. (Section 4)

04/02

TABLE 12
DISTURBED DITCH DATA

Area ID	Hydraulic Length	High Elevation	Low Elevation	Change Elevation	Slope %	Runoff CN	Manning's No.
DD-1	323.70	7102	7075	27	8.3	90	0.035
DD-2	258.90	7075	7068	7	2.7	90	0.035
DD-3	977.50	7112	7068	44	4.5	90	0.035
DD-4	763.00	7068	7020	48	6.3	90	0.035
DD-4A	210.50	7044	7038	6	2.9	90	0.035
DD-5	190.00	7024	7021	3	1.6	90	0.035
DD-6	189.30	7020	7008	12	6.3	90	0.015
DD-8	268.90	7038	7008	30	11.2	90	0.035
DD-8A	207.90	7006	6988	18	8.7	90	0.035
DD-9	445.80	7002	6974	28	6.3	90	0.035
DD-10	88.00	6992	6990	2	2.0	90	0.035
DD-11	242.80	6966	6962	4	1.6	90	0.035
DD-12	428.20	6968	6950	18	4.2	90	0.035
DD-13	422.30	6971	6964	7	1.7	90	0.035

TABLE 13
DISTURBED DITCH DESIGN SUMMARY

Ditch Structure	DD-1	DD-2	DD-3	DD-4	DD-4A
10 yr - 6 hr event (in.)	1.30	1.30	1.30	1.30	1.30
Peak Flow (cfs)	1.79	3.22	1.18	5.08	0.69
Velocity (fps)	4.26	3.24	3.05	4.99	2.26
Required Area (ft ²)	0.42	0.99	0.39	1.02	0.30
Flow Depth (ft.)	0.46	0.70	0.44	0.71	0.39
10 yr - 24 hr event (in.)	2.00	2.00	2.00	2.00	2.00
Peak Flow (cfs)	7.13	12.52	4.30	18.32	1.56
Velocity (fps)	6.02	4.55	4.22	6.88	2.78
Required Area (ft ²)	1.18	2.75	1.02	2.66	0.56
Flow Depth (ft.)	0.77	1.17	0.71	1.15	0.53
Construction					
Minimum Area (ft ²)	3.22	5.58	2.93	5.45	2.12
Minimum Depth (ft.)	1.27	1.67	1.21	1.65	1.03
*Lining/Bedrock Y/N	N	N	N	Y	N
Rip-Rap D ₅₀	-	-	-	5"	-

* Based on 10 year - 24 hour flow.

(04/02)

TABLE 13 (Continued)
DISTURBED DITCH DESIGN SUMMARY

Ditch Structure	DD-5	DD-6	DD-8	DD-8A	DD-9
10 yr - 6 hr event (in.)	1.30	1.30	1.30	1.30	1.30
Peak Flow (cfs)	1.26	6.62	0.68	7.30	1.26
Velocity (fps)	2.11	10.06	3.74	6.17	3.52
Required Area (ft ²)	0.60	0.66	0.18	1.18	0.36
Flow Depth (ft.)	0.55	0.57	0.30	0.77	0.42
10 yr - 24 hr event (in.)	2.00	2.00	2.00	2.00	2.00
Peak Flow (cfs)	2.81	21.74	1.69	23.43	2.86
Velocity (fps)	2.57	13.55	4.70	8.25	4.32
Required Area (ft ²)	1.09	1.60	0.36	2.84	0.66
Flow Depth (ft.)	0.74	0.90	0.42	1.19	0.58
Construction					
Minimum Area (ft ²)	3.08	3.92	1.69	5.71	2.33
Minimum Depth (ft.)	1.24	1.40	0.92	1.69	1.08
*Lining/Bedrock Y/N	N	**Y	N	Y	N
Rip-Rap D ₅₀	-	-	-	7"	-

* Based on 10 year - 24 hour flow.

** On Bedrock.

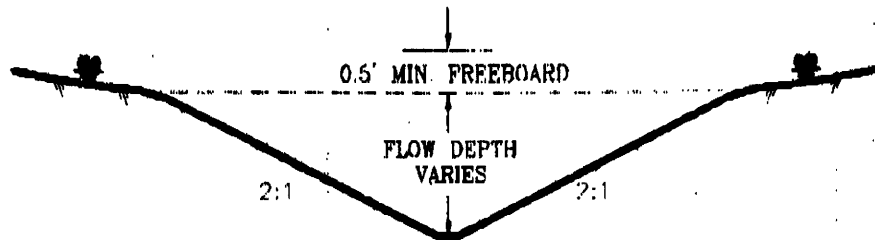
04/02

TABLE 13 (Continued)
DISTURBED DITCH DESIGN SUMMARY

Ditch Structure	DD-10	DD-11	DD-12	DD-13
10 yr - 6 hr event (in.)	1.30	1.30	1.30	1.30
Peak Flow (cfs)	2.58	7.58	4.11	0.28
Velocity (fps)	2.74	3.30	4.07	1.48
Required Area (ft ²)	0.94	2.30	1.01	0.19
Flow Depth (ft.)	0.69	1.07	0.71	0.31
10 yr - 24 hr event (in.)	2.00	2.00	2.00	2.00
Peak Flow (cfs)	7.44	24.05	13.51	0.61
Velocity (fps)	3.57	4.40	5.47	1.80
Required Area (ft ²)	2.08	5.46	2.47	0.34
Flow Depth (ft.)	1.02	1.65	1.11	0.41
Construction				
Minimum Area (ft ²)	4.62	9.25	5.18	1.66
Minimum Depth (ft.)	1.52	2.15	1.61	0.91
*Lining/Bedrock Y/N	N	N	N	N

* Based on 10 year - 24 hour flow.

UNDISTURBED AND DISTURBED DITCH
TYPICAL SECTION
(UNLINED DITCH)



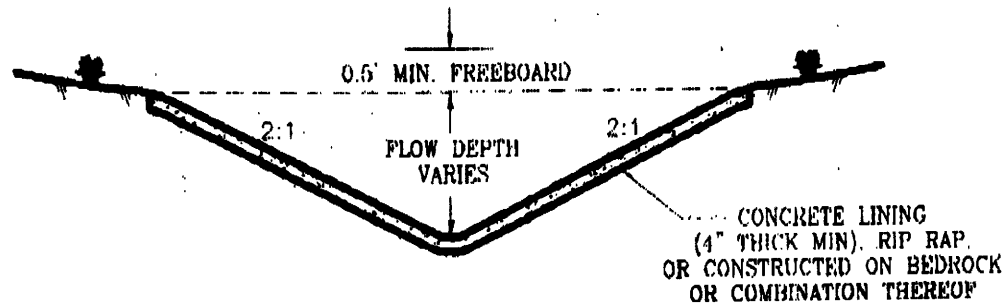
UNLINED DITCH		
DITCH	FLOW DEPTH	FLOW AREA (F.T. ²)
UD-Z	0.42	0.35
UD-15	0.59	0.71
DD-1	0.77	1.18
DD-2	1.17	2.75
DD-3	0.71	1.02
DD-4A	0.53	0.56
DD-5	0.74	1.09
DD-8	0.42	0.36
DD-9	0.58	0.66
DD-10	1.02	2.08
DD-11	1.65	5.46
DD-12	1.11	2.47
DD-13	0.41	0.34

Note: Flows based on a 10 year - 24 hour event.



FIGURE 3

UNDISTURBED AND DISTURBED DITCH
TYPICAL SECTION
(LINED DITCH)



LINED DITCH		
DITCH	FLOW DEPTH	FLOW AREA (FT. ²)
DD-4	1.15	2.86
DD-6	0.90	1.60
DD-8A	1.19	2.84

Note: Flows based on a 10 year - 24 hour event.



FIGURE 4

Title of run: DD-6 (10/6)

Solving for.....= Depth Normal

Triangle

Flow depth (ft).....=	0.57
First Side slope.....=	2.0
Second Side slope.....=	2.0
Slope of diversion.....=	0.0630
Manning's n.....=	0.015
CFS.....=	6.62
Cross section area (sqft).....=	0.66
Hydraulic radius.....=	0.26
fps.....=	10.06
Froude number.....=	3.50

Title of run: DD-6 (10/24)

Solving for.....= Depth Normal

Triangle

Flow depth (ft).....=	0.90
First Side slope.....=	2.0
Second Side slope.....=	2.0
Slope of diversion.....=	0.0630
Manning's n.....=	0.015
CFS.....=	21.74
Cross section area (sqft).....=	1.60
Hydraulic radius.....=	0.40
fps.....=	13.55
Froude number.....=	3.77

**WEST RIDGE** RESOURCES, INC.

P.O. BOX 902
PRICE, UTAH 84501
PHONE (435) 637-5385
FAX (435) 637-8860

May 2, 2002

*Pamela Grubaugh-Littig
Permit Supervisor
Utah Division of Oil, Gas & Mining
P.O. Box 145801
Salt Lake City, Utah 84114-5801*

*Re: NOV Abatement N02-49-1-1
West Ridge Mine
C/007/041-AM02A
Carbon County, Utah*

Dear Ms. Grubaugh-Littig,

Regarding the above referenced NOV, WEST RIDGE Resources requires additional time to perform the field changes associated with the Technical Analysis which has recently been completed. WEST RIDGE is requesting until May 20th, 2002 to complete the field work.

Thank you for your consideration.

Sincerely,

*Michael W. Glasson
Environmental Coordinator*